MLSC 552: CONSERVING BIODIVERSITY
Spring 2017: Course Syllabus
April 6th – June 1st, 2017
Th 6:15-9:30PM; ACC 300

Instructor: Cassidy B. Johnson, PhD
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Office hours: *I do not have a physical office at Rice; however, I can make myself available to meet on some days and in the evening. Please call or email me to make arrangements if necessary.*

Reading: There is no required textbook for the course; however, we will using Elizabeth Kolbert's, *The Sixth Extinction: An Unnatural History* (2014; Bloomsbury Press, London; ISBN 9781408851241) as the focus of our discussion sessions. This book can be purchased at any bookstore (even at Half Price Books). *I will be asking you to read the first three chapters the first week of class, so I suggest that you purchase the book early and dive in!* Additional reading assignments will be provided by the instructor.

Course Description: This course examines the field of conservation biology, which at its core, is the study and protection of biodiversity. In this course we will explore the definition of biodiversity and why is it is important from an ecological, societal, and political perspective; including why maintaining high levels of biodiversity ultimately maintains the ecosystem services that we depend on. We will investigate the ongoing, anthropogenic threats to biodiversity as well as the principles of conservation management that are being used to mitigate the loss of species on both a local and global scale.

Course Objectives:
1) To learn the fundamental principles of conservation biology, with an emphasis on biodiversity
2) To gain familiarity with the tools and techniques utilized by conservation scientists and planners
3) To analyze and critically evaluate ideas, arguments, and points of view related to the field of conservation biology
4) To synthesize and apply the course material through the design of a hypothetical conservation plan
5) To gain an appreciation and awareness of local conservation issues

Course schedule: I make every effort to adhere to the schedule; however, I reserve the right to modify the schedule if necessary. Students will be notified in a timely manner of any change to the schedule or assignment deadlines.

Tentative Course Schedule Spring 2017

Week	Date	Topic	Reading assignments
1	4/6	Introduction to Conservation biology	
2	4/13	Biodiversity matters	Chapters 1-3: *Class disscussion*
3	4/20	Extinction	Chapters 4-5: *Class discussion*
4	4/27	Climate change & Conservation	Chapters 6-7
5	5/4	Conservation tools & planning	Chapters 8-9
6	5/11	In situ & ex situ conservation	Chapters 10-11
7	5/18	Endangered species and the ESA	
8	5/25	Humans and a biodiverse world	Chapter 12: *Class discussion*
9	6/1	Final presentations	
Additional meetings outside of class (to be decided in class)			
Houston Zoo, Inc. Houston toad conservation program visit: Date TBA			
Prairie restoration event: Date TBA			
(Optional) Amphibian survey evening: Date TBA			

Student Evaluation: Assessment of student performance will be based on participation in the in-class discussions and/or activities, and the final project. See breakdown of point system below:

Grade breakdown

Assignment	Points	% of grade
Disscussion	**40**	40%
Lead	30	
Support	10	
Class activities	**10**	10%
Project Pitch	**10**	10%
Final project	**40**	40%
Presentation	25	
Summary	15	
Total points	**100**	100%

Grading: Grades will be calculated out of 100 points. Grades will be distributed as follows: ≥90% A , 80-89% B , 70-79% C, 60-69% D, ≤59% F.

Description of student assignments:

Class discussions (40 points total): We will have, in-class discussions on the major topics covered in the chapters of *The Sixth Extinction* each class period. Students will be leading the discussions on the days noted in the schedule. Each student will choose a chapter(s) to serve as the discussion lead. To encourage discussion relevant to the course topics, a few "guide" questions will be provided in advance;

however, students will be asked to develop their own questions. Students not leading the discussion must participate in the conversation earn "support" points.

In class activities (10 points total): The in-class activities will consist of active, hands on assignments that will help to further explore the course topics. These activities may include conducting a "mini" biodiversity analysis of the greenspace around the building, examining historic and current climate data literature, and a critical analysis of the Endangered Species Act of 1973.

Conservation plan final project (40 points total): Students will select a locally threatened or endangered species to research and design a hypothetical species conservation plan. In the conservation plan, students will identify the historic and continuing threats and will propose a conservation strategy for their selected species. The plan will also include any identifiable benefits correlated with the protection of the species and additional recommendations for education and outreach. Students will present their final plan to the class on the last day of the course, along with a written summary of their proposal. The details of this project and the species selection will take place on the first day of class.

Species project pitch (10 points total): The species project "pitch" will provide an opportunity for students to present ideas for their hypothetical species conservation plan. The pitch will include background information on the species (why is it threatened and it's present risk of extinction), why it should be considered for conservation, and a brief outline of the putative plan. The pitch provide students an opportunity to both give and receive critical analysis and feedback on their proposed plan.

Absences: Absences and missed work will be dealt with on a case-by-case basis. If you know you will be missing a class, please contact me as soon as possible.

Disabilities: Any student with a disability that requires accommodation is encouraged to speak with me within the first two weeks of the class. The student is additionally encouraged to contact the Director of Disabled Student Services in the Ley Student Center.